DOCUMENT RESUME

ED 230 790 CE 036 281

AUTHOR Hohhertz, Durwin
TITLE Soldadura (Welding). Spanish Translations for Welding.
INSTITUTION East Texas State Univ., Commerce. Occupational Curriculum Lab.
SPONS AGENCY Texas Education Agency, Austin. Dept. of Occupational Education and Technology.
PUB DATE 80
NOTE 55p.
AVAILABLE FROM Occupational Curriculum Lab., East Texas State University, Commerce, TX 75428.
PUB TYPE Guides - Classroom Use - Guides (For Teachers) (052)
LANGUAGE English; Spanish

EDRS PRICE MF01 Plus Postage. PC Not Available from EDRS.
DESCRIPTORS Bilingual Education; *Bilingual Instructional Materials; Metal Working; Postsecondary Education; Repair; Safety; Secondary Education; *Spanish Speaking; *Trade and Industrial Education; *Transparencies; *Welding

ABSTRACT

Thirty transparency masters with Spanish subtitles for key words are provided for a welding/general mechanical repair course. The transparency masters are on such topics as oxyacetylene welding; oxyacetylene welding equipment; welding safety; different types of welds; braze welding; cutting torches; cutting with a torch; protective equipment; arc welding; arc welding equipment; welding positions; joints and welds; piercing, gouging, and beveling; DC polarity; AC welder; and properly and improperly formed beads. (YLB)

****
* Reproductions supplied by EDRS are the best that can be made *
* from the original document. *
****

SPANISH TRANSLATIONS
FOR WELDING

ED230790

SOLDADURA

Prepared by Durwin Hohhertz

U.S. DEPARTMENT OF EDUCATION
NATIONAL INSTITUTE OF EDUCATION
EDUCATIONAL RESOURCES INFORMATION CENTER (ERIC)

☑ This document has been reproduced as received from the person or organization originating it.

☐ Minor changes have been made to improve reproduction quality.

• Points of view or opinions stated in this document do not necessarily represent official NIE position or policy.

Published by
Occupational Curriculum Laboratory
East Texas State University
Commerce, Texas

in cooperation with
Occupational Education and Technology
Texas Education Agency
Austin, Texas

"PERMISSION TO REPRODUCE THIS MATERIAL IN MICROFICHE ONLY HAS BEEN GRANTED BY

D Bierstow

TO THE EDUCATIONAL RESOURCES INFORMATION CENTER (ERIC)."

CE036281

FIRST EDITION
1980

Brand names, company names, trademarks, or other identifying symbols appearing in the text are used to clarify and identify and do not constitute a recommendation or endorsement.

To insure educational equity, this material has been reviewed to eliminate bias or stereotyping.

OCCUPATIONAL
CURRICULUM
LABORATORY

ETSU, an Equal Opportunity University, complies with all federal requirements prohibiting discriminatory activities.

PREFACE

It is the intent of this supplement to provide the General Mechanical Repair instructor with Spanish sub-titles for key words on the transparencies. This will allow the instructor to better relate to the student with limited English-speaking ability the more technical aspects of the information presented in class.

We strongly advise that each instructor consult with an individual with expertise in the local terminology used by the Spanish-speaking population in a given area. Such a person should be asked to review the translations and make recommendations concerning any changes needed. By becoming familiar with the proper pronunciation of technical terms, the instructor will be able to establish better relations with the student.

ACKNOWLEDGMENTS

Appreciation is extended to those individuals who contributed their time and talent in the translation of WELDING transparencies.

Special thanks go to Richard Perez, I.C.T. Coordinator, and Alcario Franco, Jr., CVAE General Metal Trades Instructor, both of Jefferson High School in El Paso, Texas, and to the Bilingual Program staff at East Texas State University for their help in translating these materials.

Thanks also are due the following:

Robert Norsworthy, art director, and his staff for the illustrations on the transparencies;

Frances Hyatt, editor, for editing and supervising typing of materials;

Dale White, print shop director, and the printing staff for the finished product.

LIST OF TRANSPARENCIES

UNIT I

TM-1 OXYACETYLENE WELDING EQUIPMENT I-15
TM-2 OXYACETYLENE WELDING FLAMES I-17
TM-3 LOOK BEFORE YOU LIGHT I-19
TM-4 DON'T PICK UP HOT METAL WITH GLOVES I-21

UNIT II

TM-1 FLAT BUTT WELD (NO FILLER ROD) II-15
TM-2 FLAT FLANGE WELD II-17
TM-3 FLAT CORNER WELD II-19
TM-4 FLAT BUTT WELD II-21
TM-5 FLAT LAP WELD II-23
TM-6 FLAT TEE WELD II-25
TM-7 BRAZE WELDING II-27

UNIT III

TM-1 CUTTING TORCH EQUIPMENT III-11
TM-2 CUTTING TORCHES III-13
TM-3 POSITIONING THE TORCH III-15
TM-4 TORCH TIPS III-17
TM-5 STEPS IN CUTTING III-19
TM-6 CUTTING A BEVEL III-21
TM-7 PIERCING A HOLE III-23
TM-8 EXAMPLES OF POOR TORCH CUTS III-25

UNIT IV

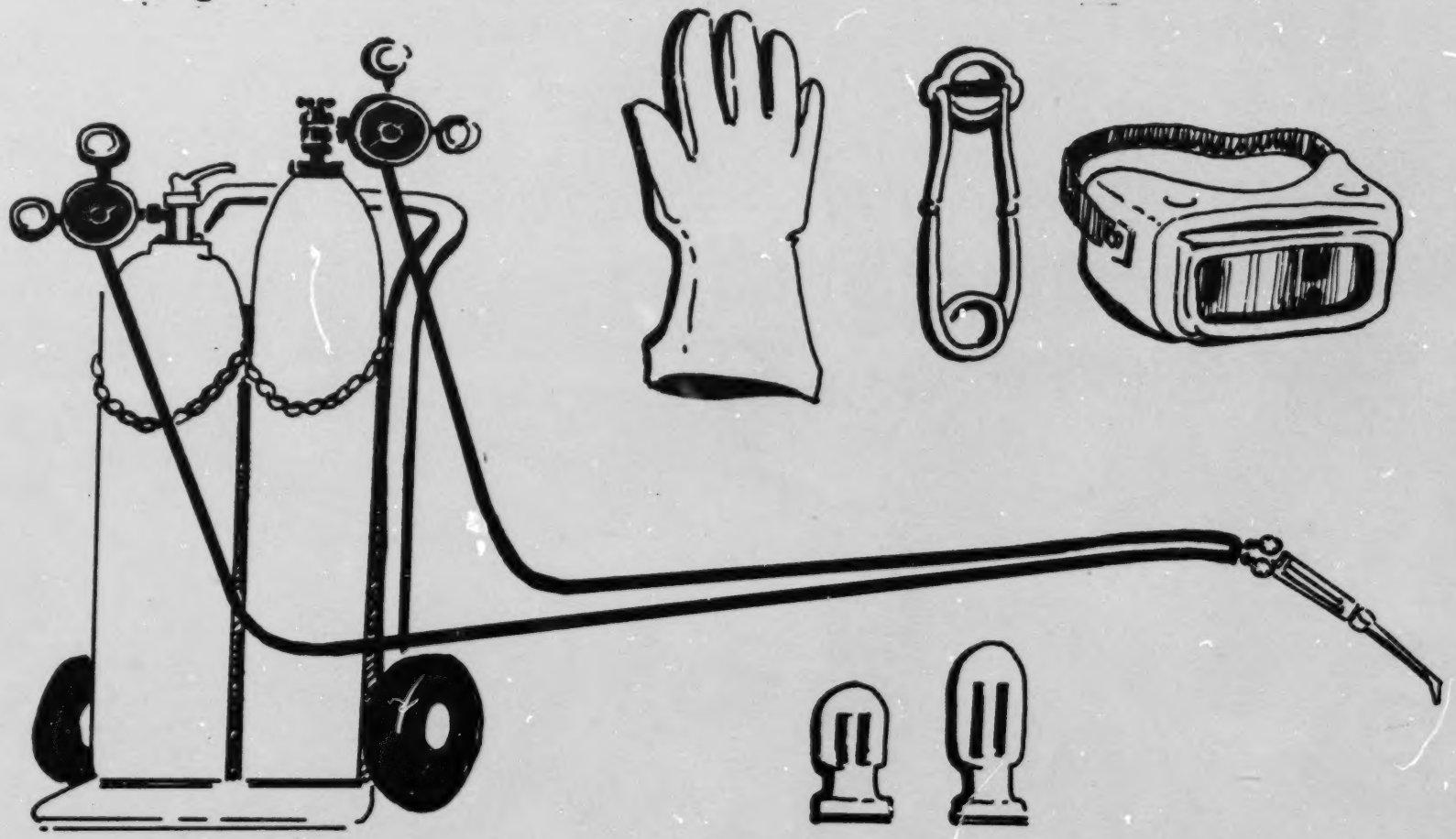
TM-1 PROTECTIVE EQUIPMENT IV-17
TM-2 WELDING SAFETY IV-19
TM-2A ARC WELDING RADIATION CAN BURN! IV-21
TM-3 WELDING EQUIPMENT IV-23
TM-4 ELECTRODE CODING IV-25
TM-5 WELDING POSITIONS IV-27
TM-6 JOINTS AND WELDS IV-29
TM-7 PIERCING, GOUGING, AND BEVELING IV-31
TM-8 HELMET LENS INSTALLATION IV-33
TM-9 DC POLARITY IV-35
TM-10 AC WELDER IV-37

UNIT V

TM-1 PROPERLY AND IMPROPERLY FORMED BEADS V-11

OXYACETYLENE WELDING EQUIPMENT

EQUIPO DE SOLDADURA OXYGENO-ACETELINO



TM-1

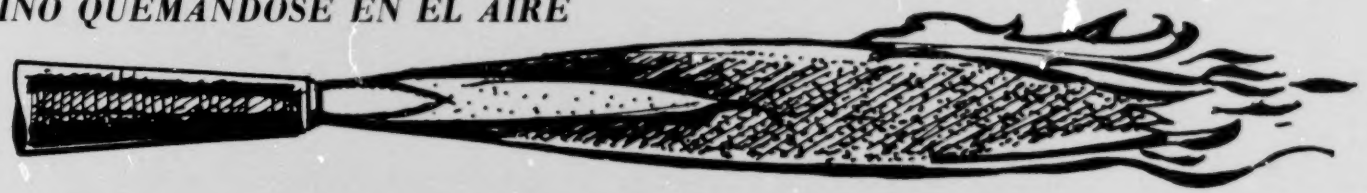
I-15

OXYACETYLENE WELDING FLAMES

LLAMAS DE SOLDADURA DE OXYGENO-ACETELINO

ACETYLENE BURNING IN AIR

ACETELINO QUEMANDOSE EN EL AÍRE



CARBURIZING

CARBÓN SÍENDO DESPEDÍDO

NEUTRAL

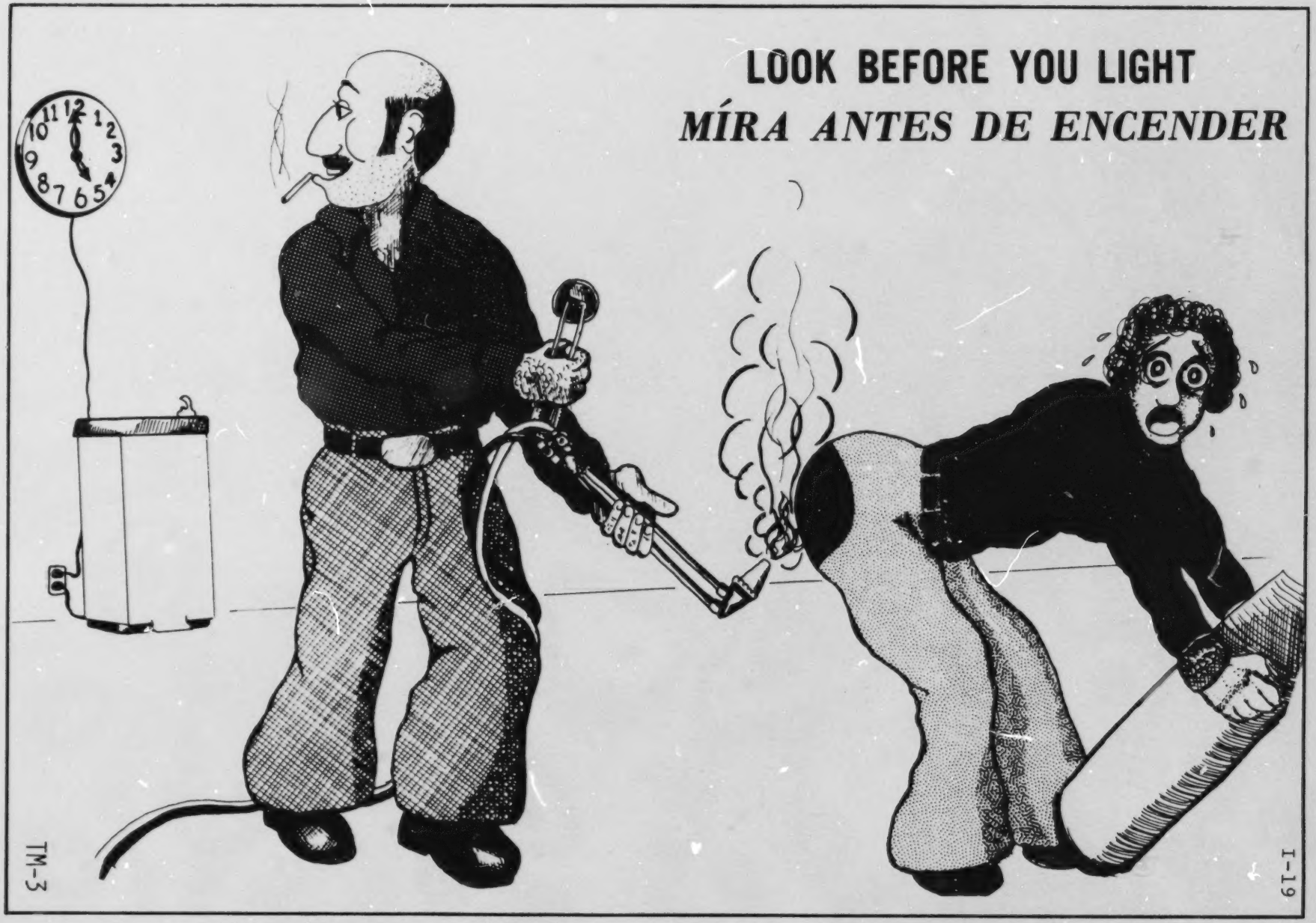
NEUTRAL

OXIDIZING

OXYGENO SÍENDO COMBINADO

IM-2

I-17


LOOK BEFORE YOU LIGHT
MÍRA ANTES DE ENCENDER
TM-3
I-19

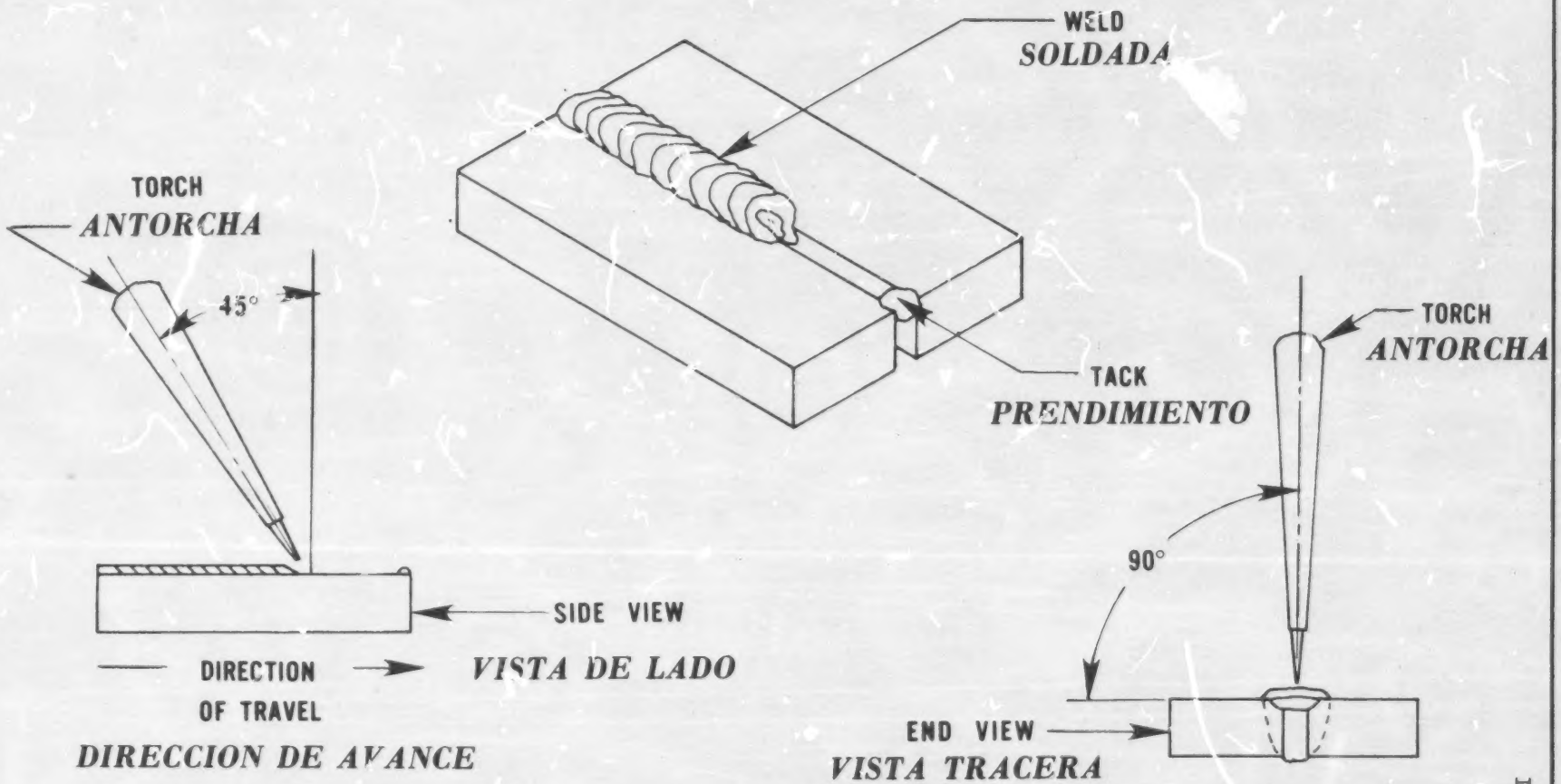
DON'T PICK UP HOT METAL WITH GLOVES - USE PLIERS

NUNCA SE TOCA EL METAL CALIENTES CON LOS GUANTES- USE TENAZAS

TM-4

FLAT BUTT WELD (NO FILLER ROD)

PLANA SOLDADURA DE TOPE (SIN VARÍLLA DE RELLENO)

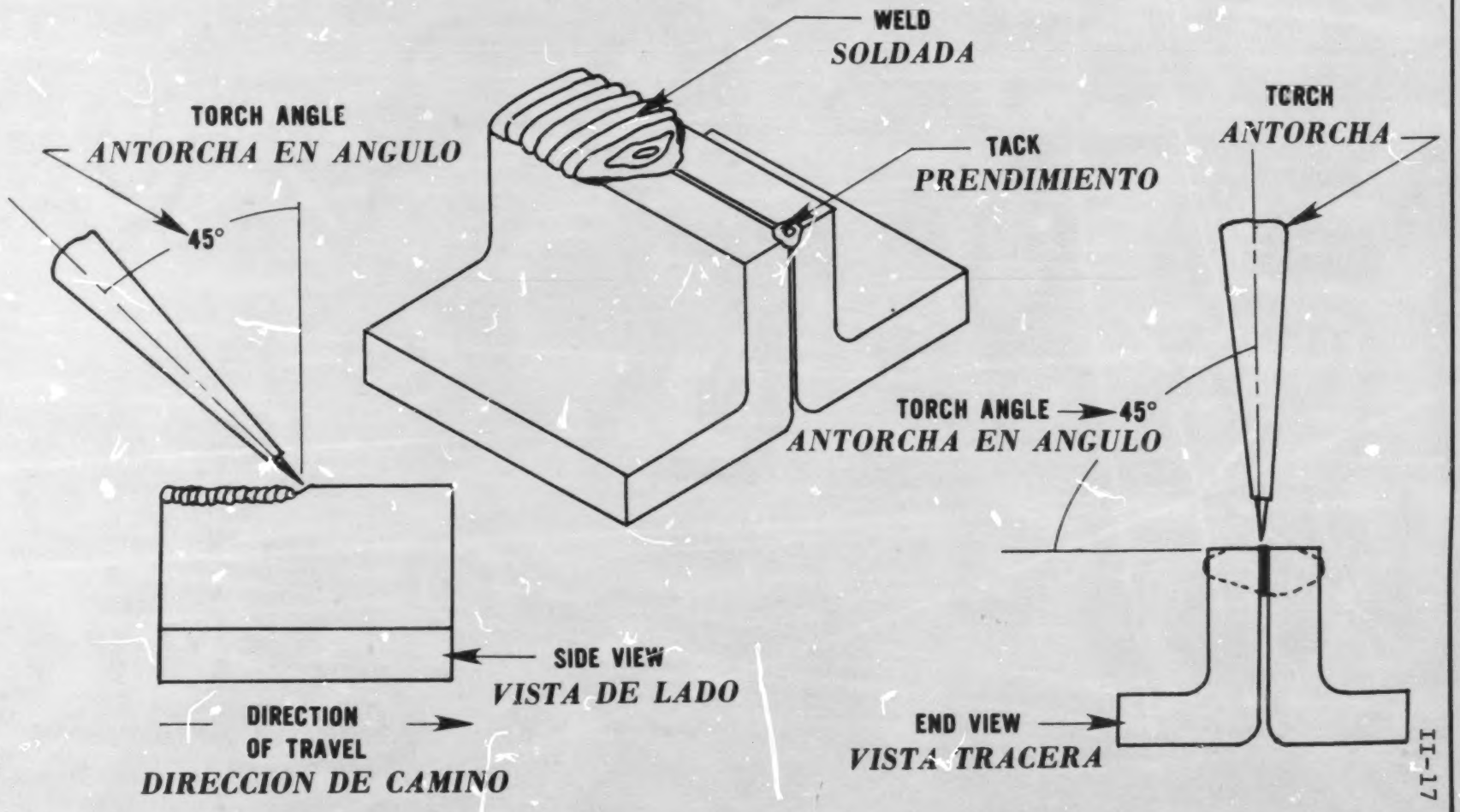


TM-1

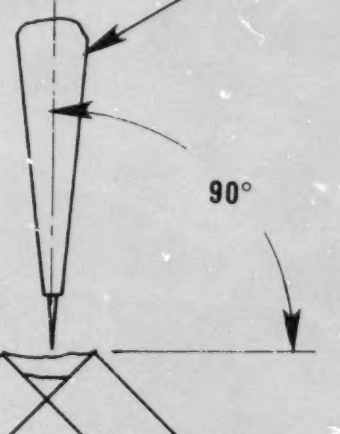
II-15

FLAT FLANGE WELD (NO FILLER ROD)

SOLDADURA DE REVORDE PLANA (SIN VARÍLLA DE RELLENO)



FLAT CORNER WELD (NO FILLER ROD)
SOLDADURA PLANA DE ESQUINA (SIN VARÍLLA DE RELLENO)

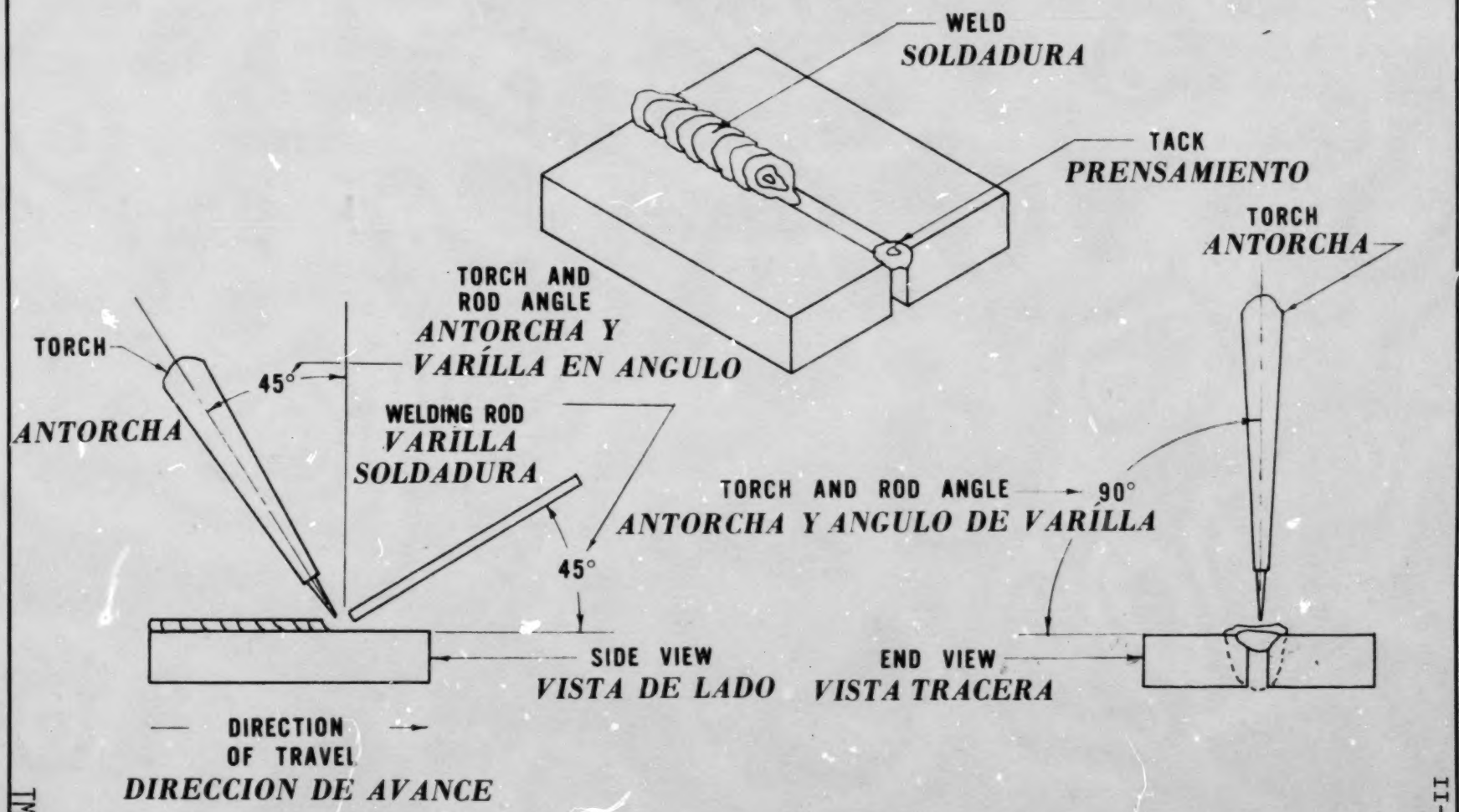


DIRECTION OF TRAVEL
DIRECCION DE AVANCE

TM-3

II-19

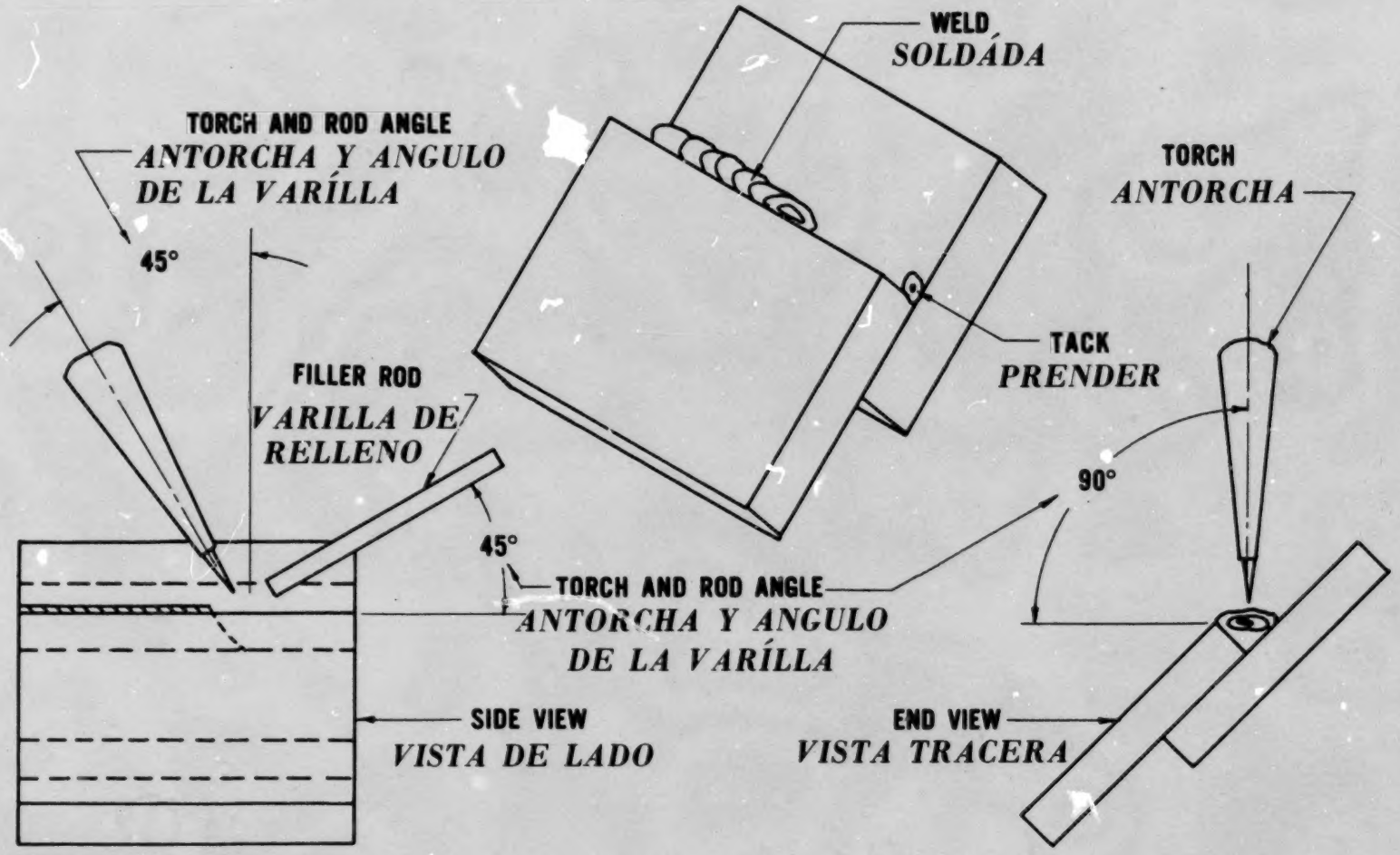
FLAT BUTT WELD
PLANA SOLDADURA DE TOPE



TM-4

II-21

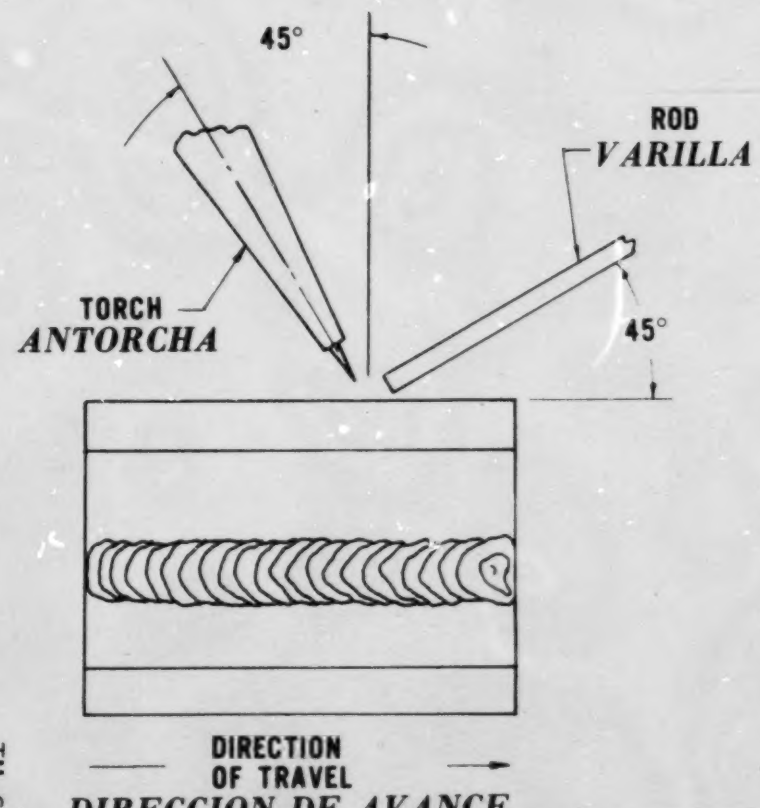
FLAT LAP WELD
SOLDAR PLANOS ENCIMADOS

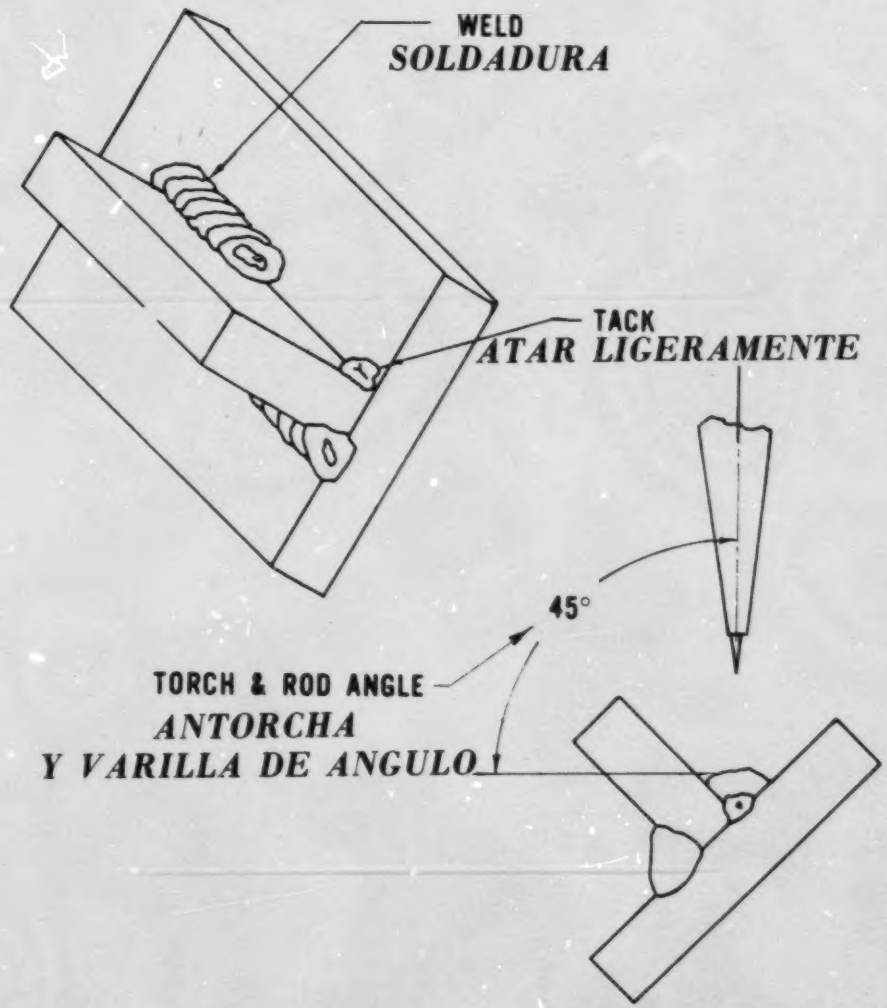


TM-5

II-23

FLAT TEE WELD
SOLDADURA PLANA DE TEE

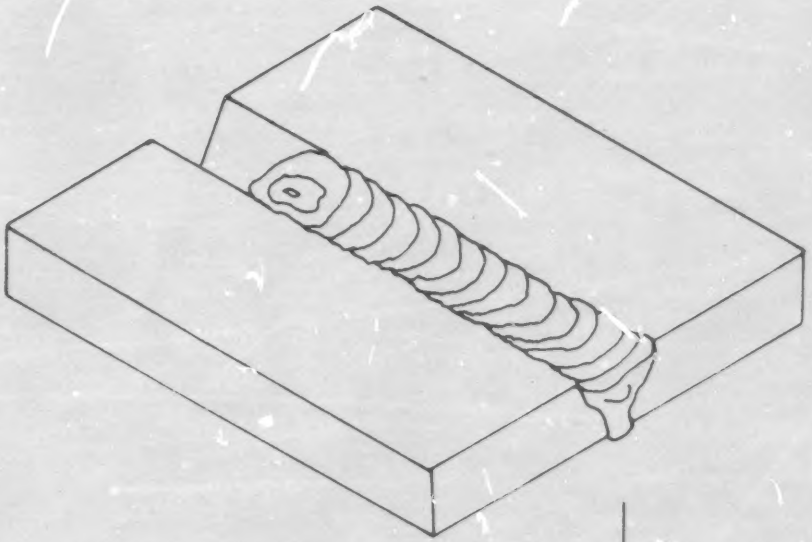


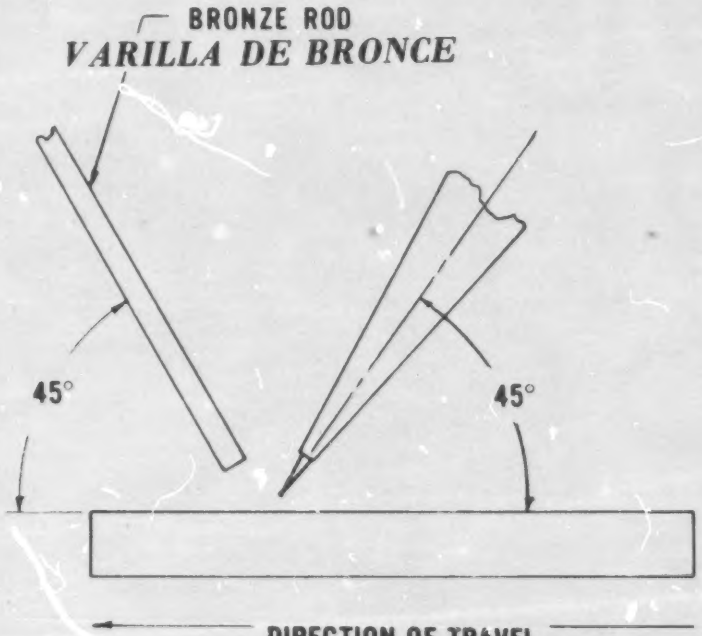


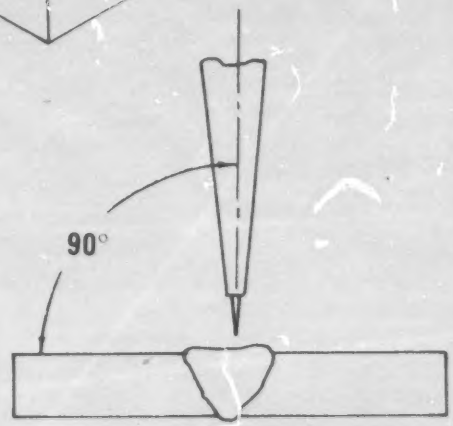
TM-6

II-25

BRAZE WELDING
SOLDADURA DE BRONCE



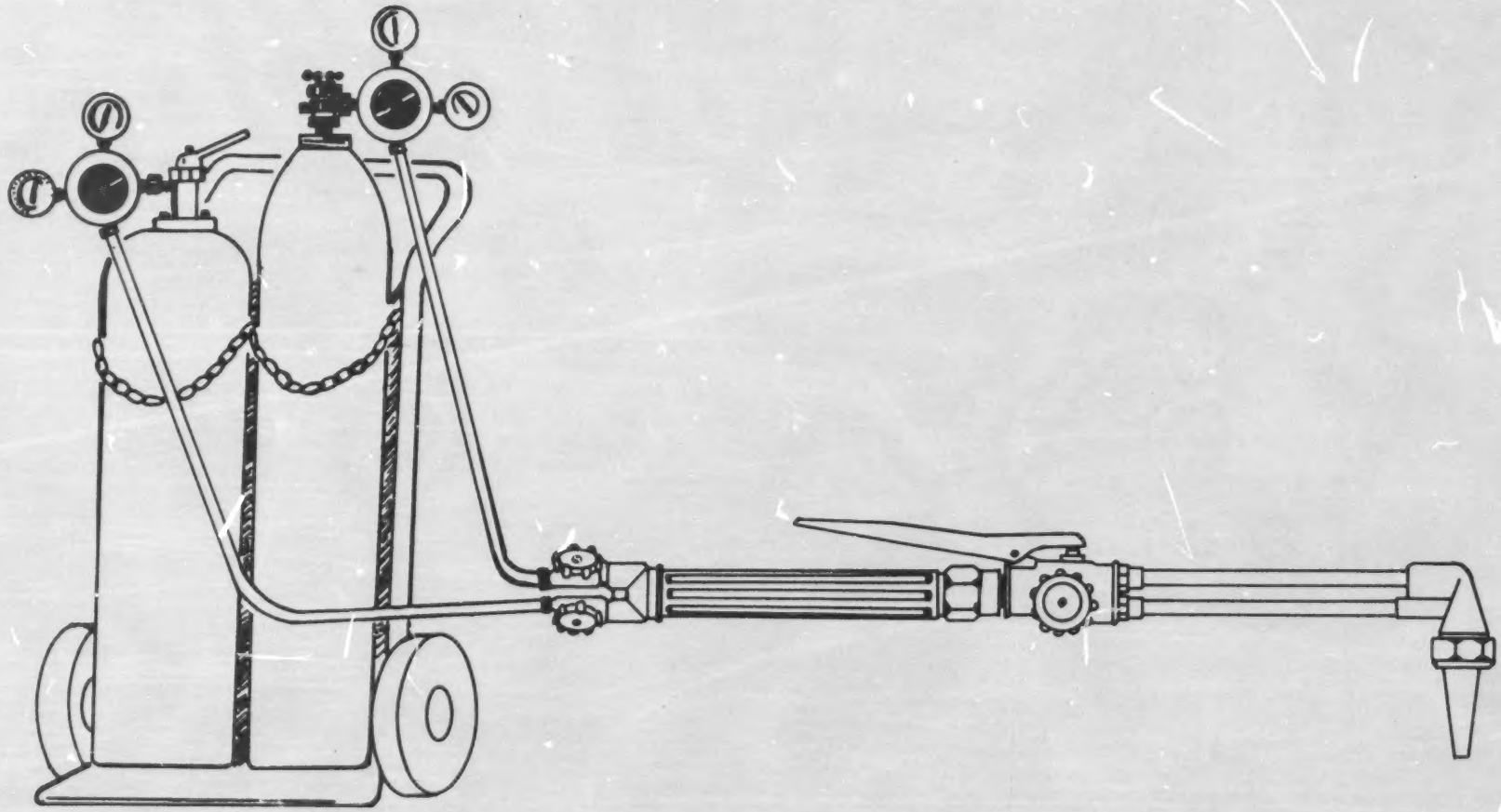




TM-7

II-27

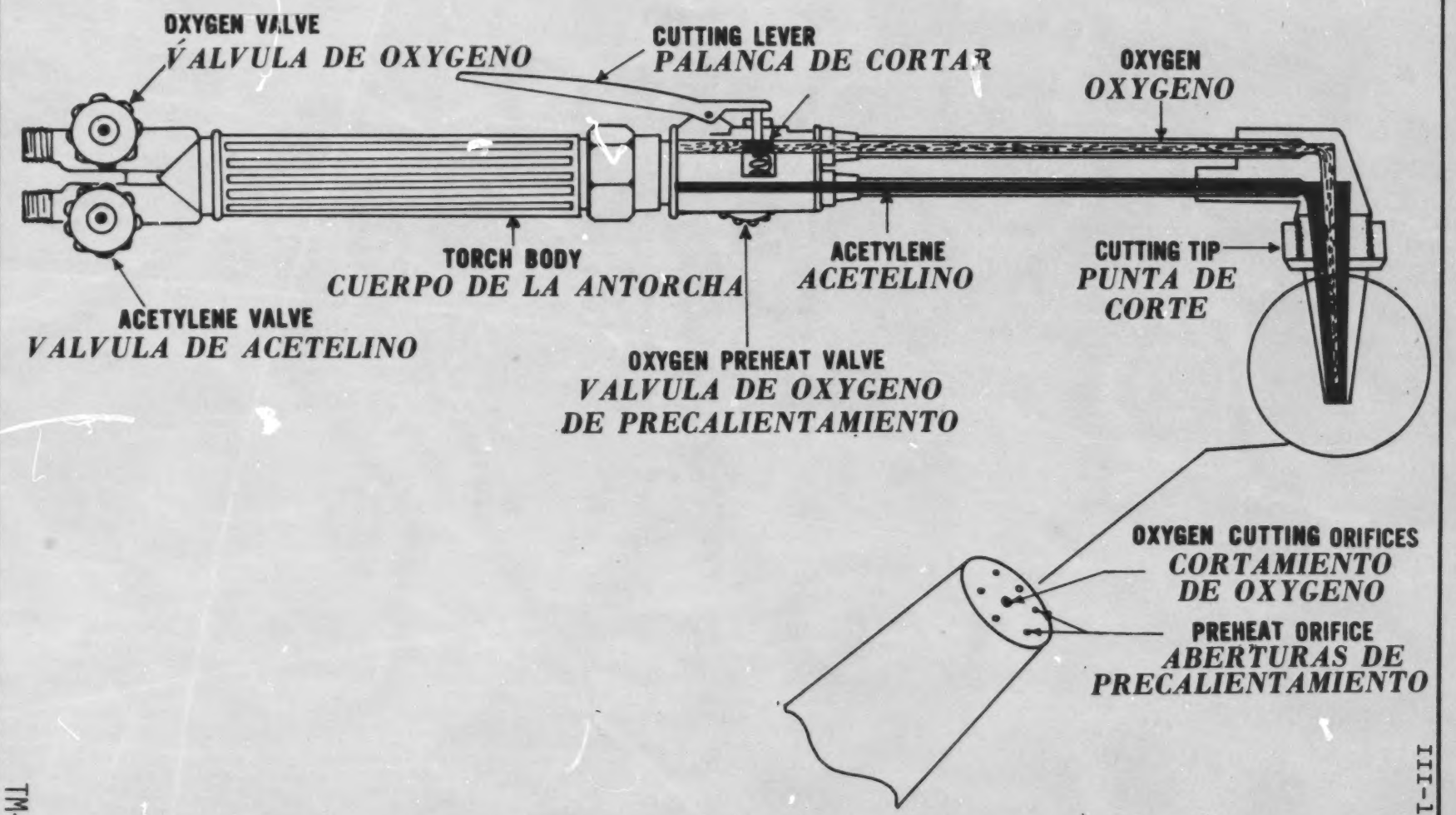
CUTTING TORCH EQUIPMENT
EQUIPO DE LA ANTORCHA DE CORTAR



TM-1

III-11

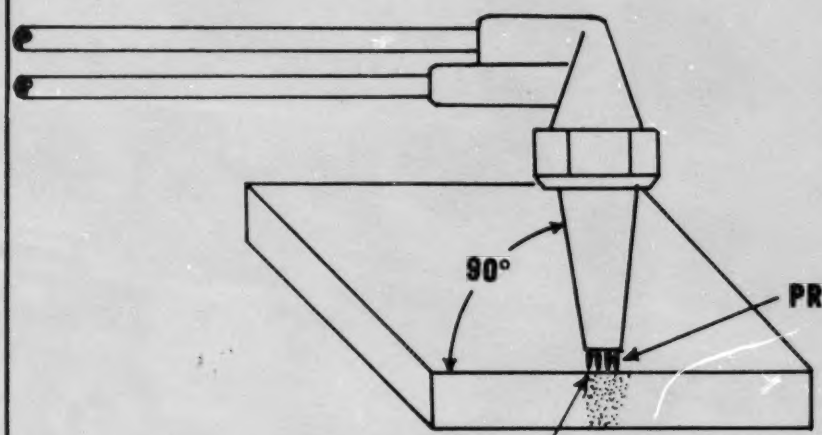
CUTTING TORCHES
ANTORCHAS CORTADORAS

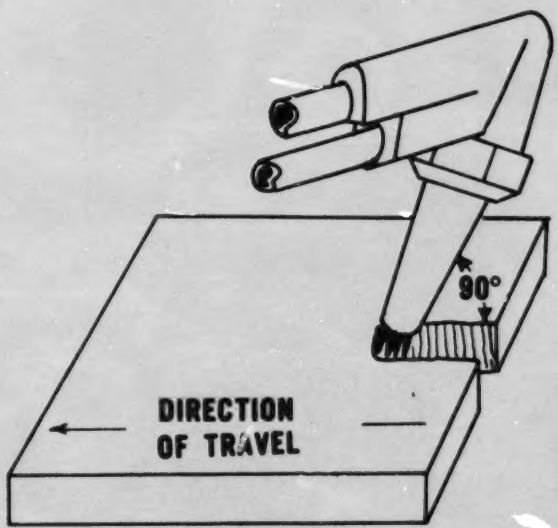


TM-2

III-13

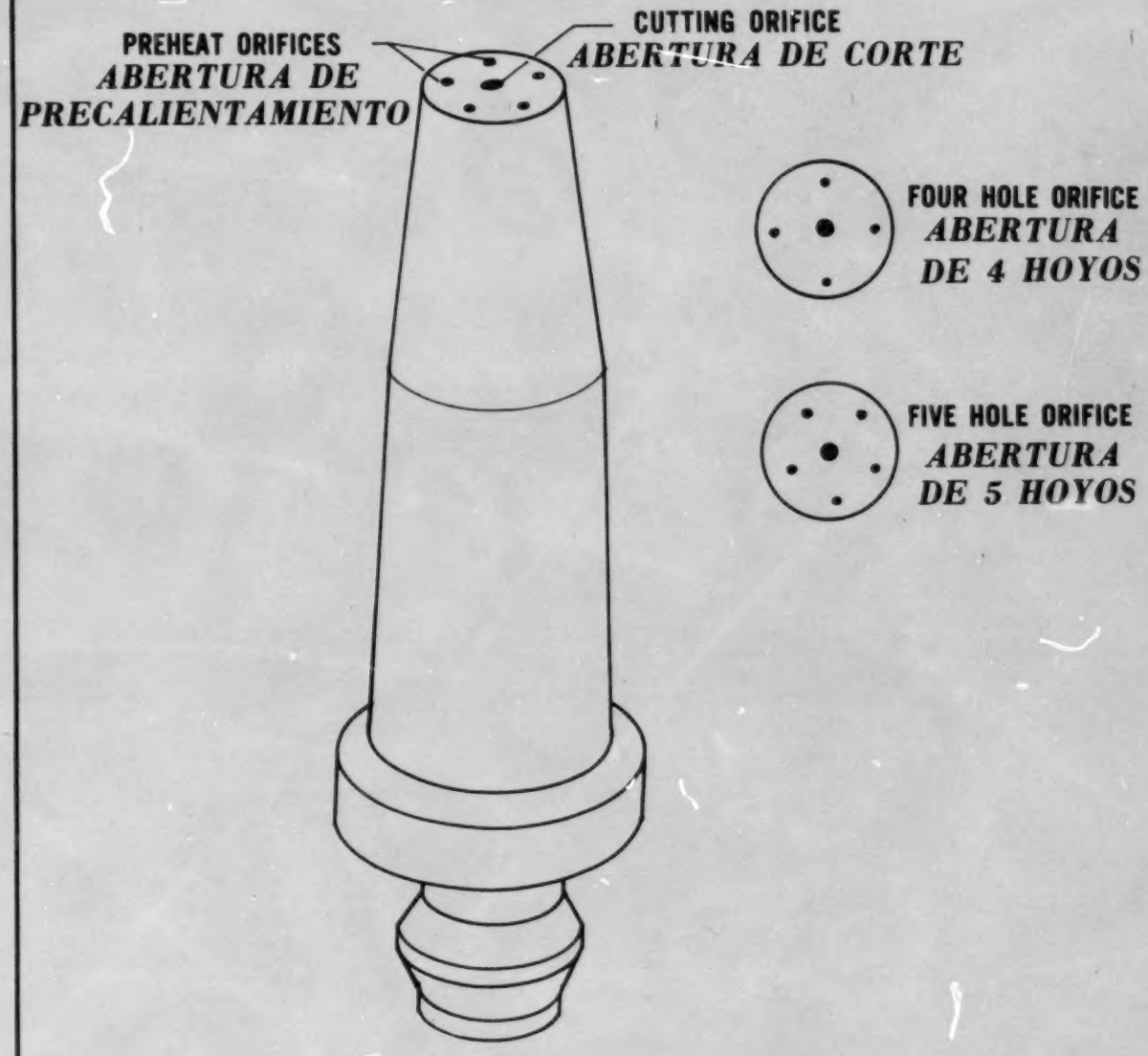
POSITIONING THE TORCH
COLOCANDO LA ANTORCHA





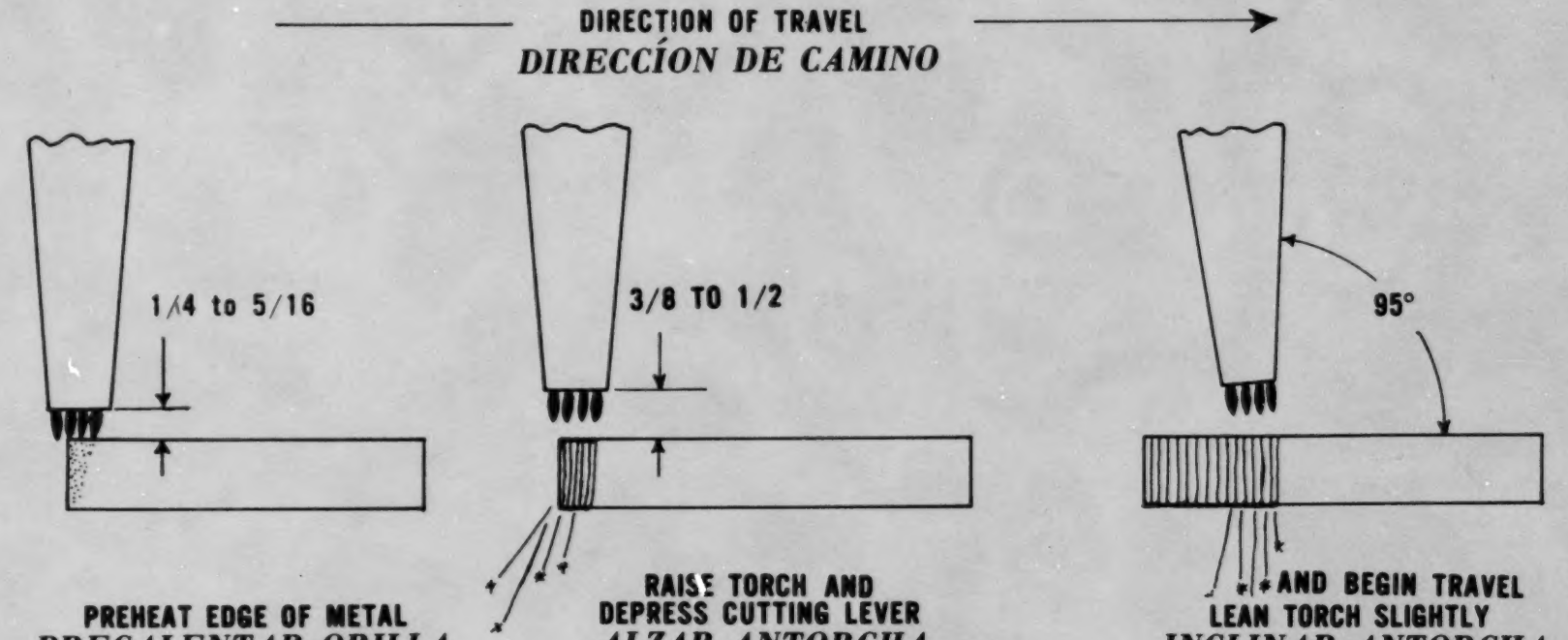
TM-3

TORCH TIPS
PUNTA DE ANTORCHA



TM-4

STEPS IN CUTTING
DIRECCIONES EN CORTAR

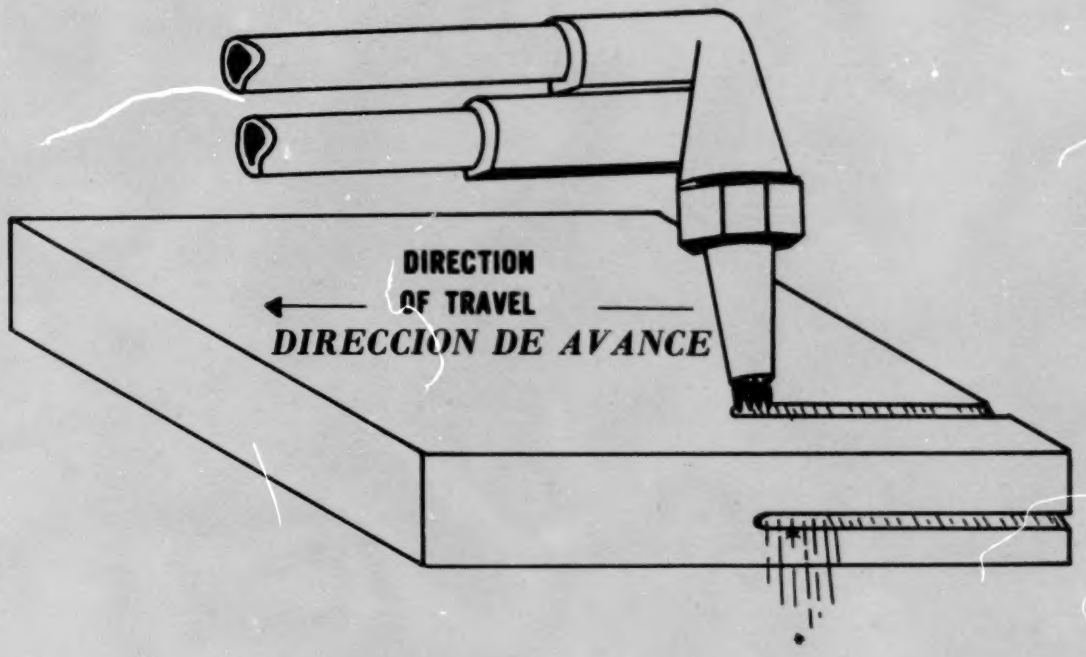


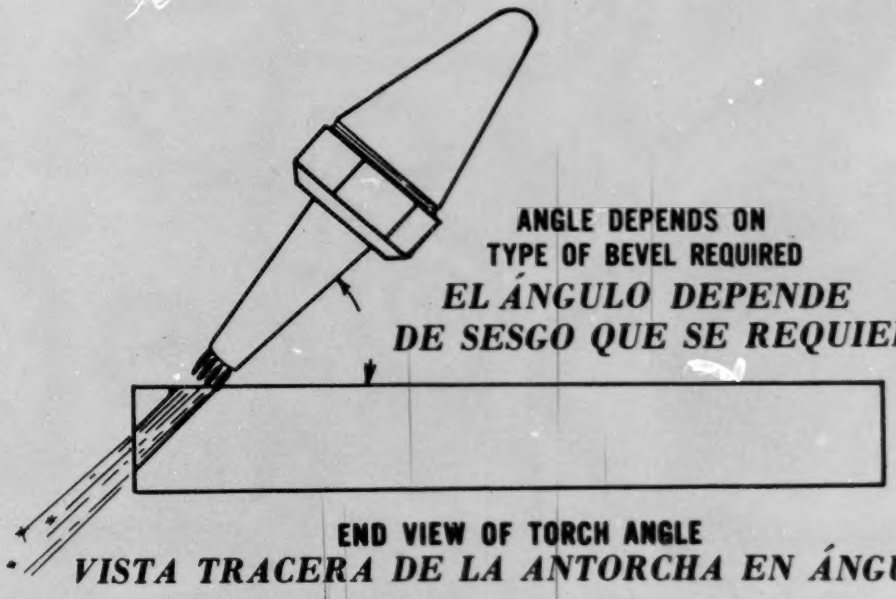
TM-5

III-19

CUTTING A BEVEL

CORTANDO UN ÁNGULO AL SESGO



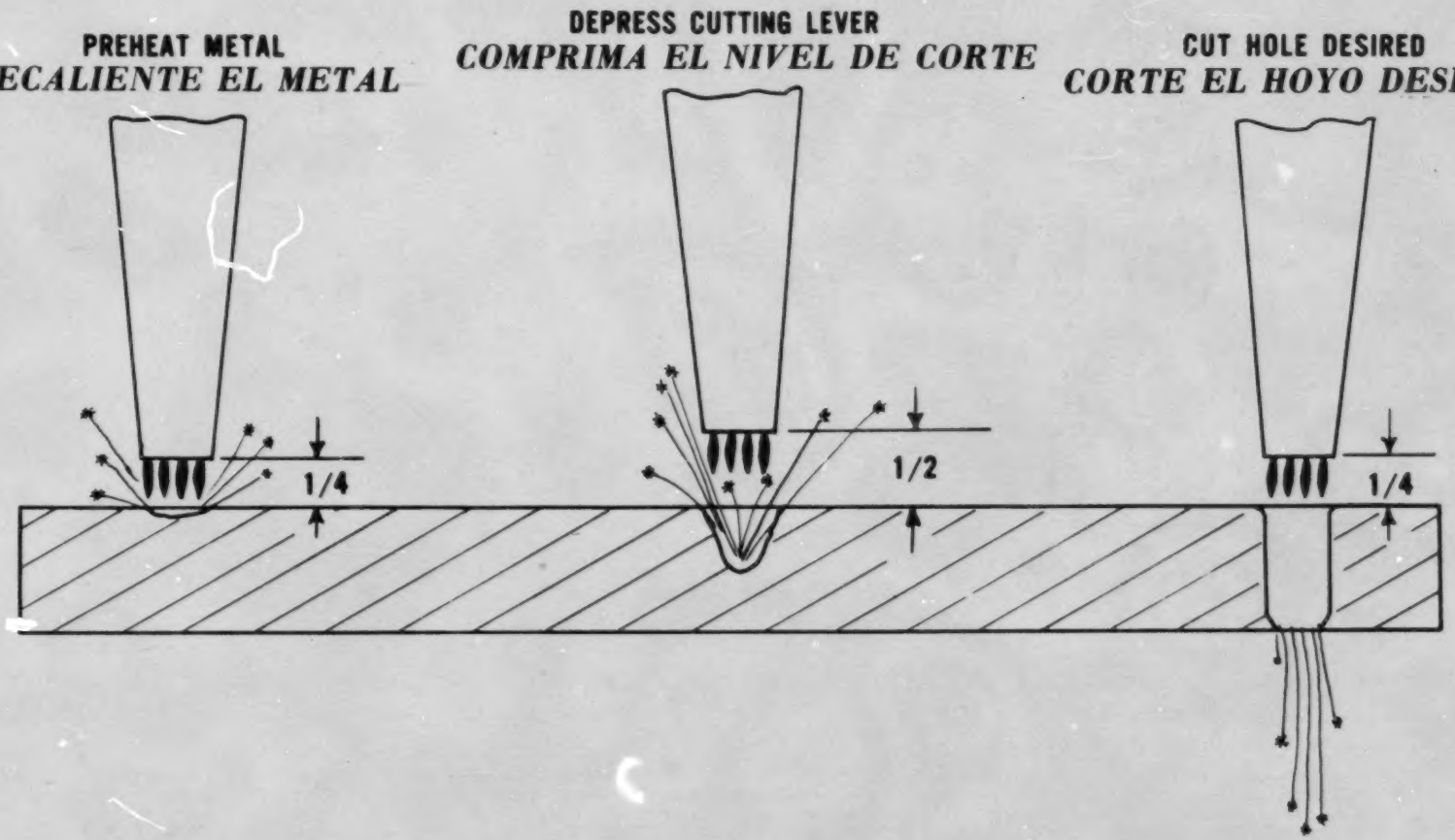


END VIEW OF TORCH ANGLE

VISTA TRACERA DE LA ANTORCHA EN ÁNGULO

TM-6

PIERCING A HOLE
TALADRAR UN HOYO



TM-7

III-23

EXAMPLES OF POOR TORCH CUTS
EJEMPLOS DE CORTE CON ANTORCHA MUY POBRES

A GOOD CUT
UNA BUENA CORTADA

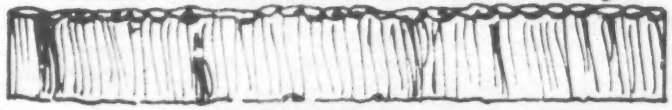
PREHEAT FLAMES TOO SMALL
FLAMA DE PRECALIENTAMIENTO MUY LARGA

CUTTING SPEED TOO SLOW
VELOCIDAD DE CORTE MUY BAJA

PREHEAT FLAMES TOO LONG
FLAMA DE PRECALENTAMIENTO MUY BAJA

CUTTING SPEED TOO FAST
VELOCIDAD DE CORTE MUY ALTA

OXYGEN PRESSURE TOO LOW
PRESIÓN DE OXYGENO MUY BAJA



UNSTEADY TORCH HANDLING
CONTROL DE LA ANTORCHA INPRECISO

OXYGEN PRESSURE TOO HIGH
PRESIÓN DE OXYGENO MUY ALTA

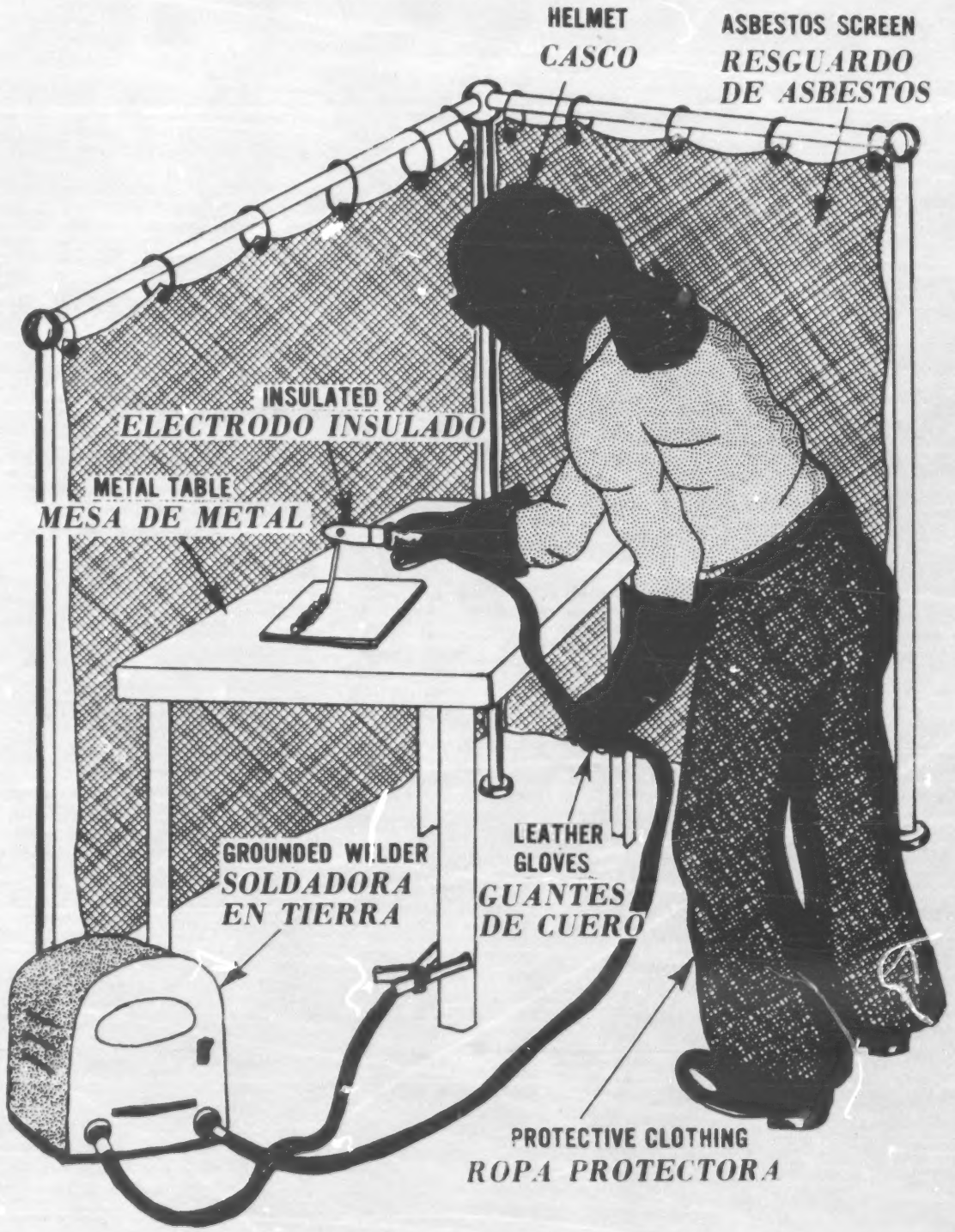
CUT STOPPED AND STARTED POORLY
CORTE PARADO Y COMENSADO MUY POBRE

TM-8

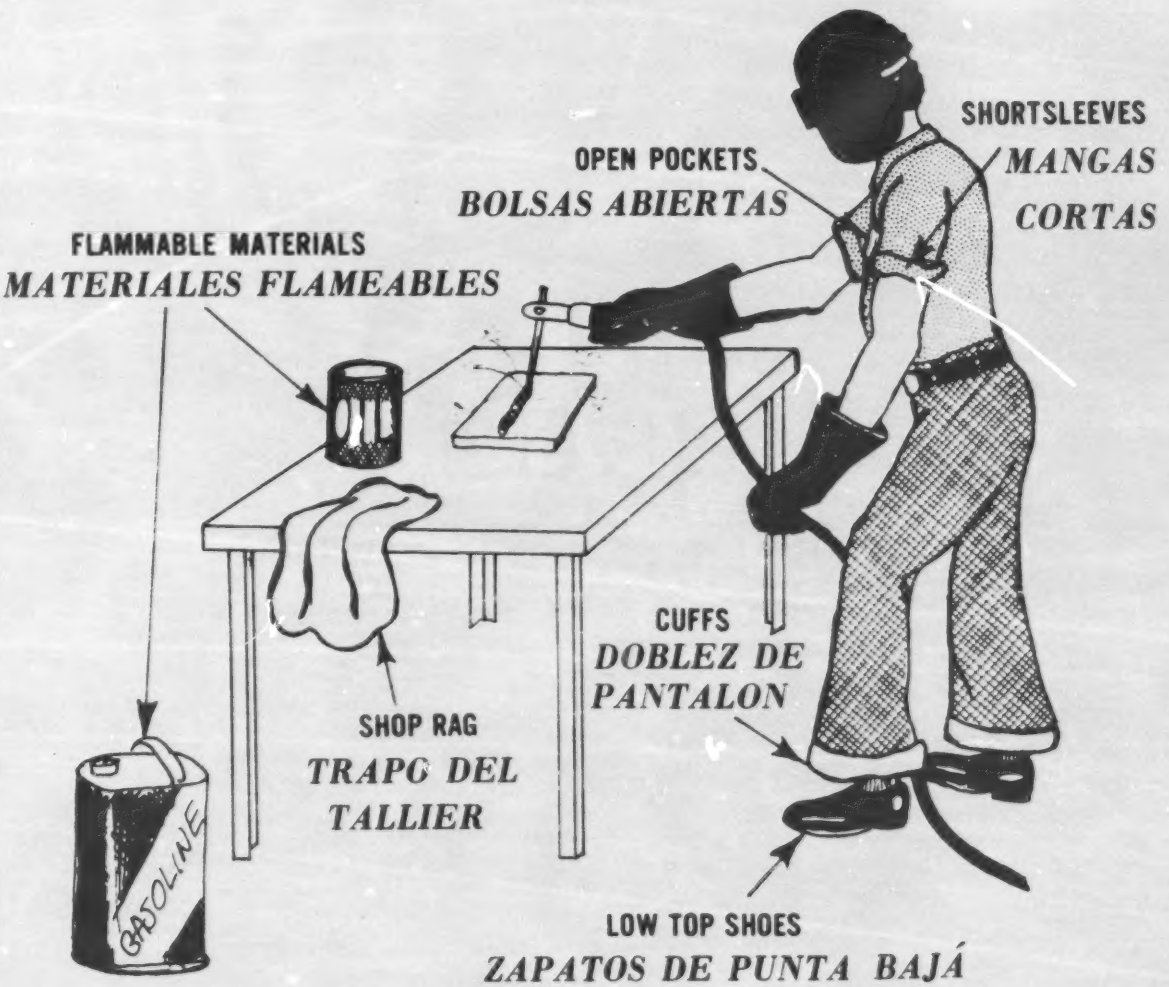
III-25

PROTECTIVE EQUIPMENT

EQUIPO PROTECTOR



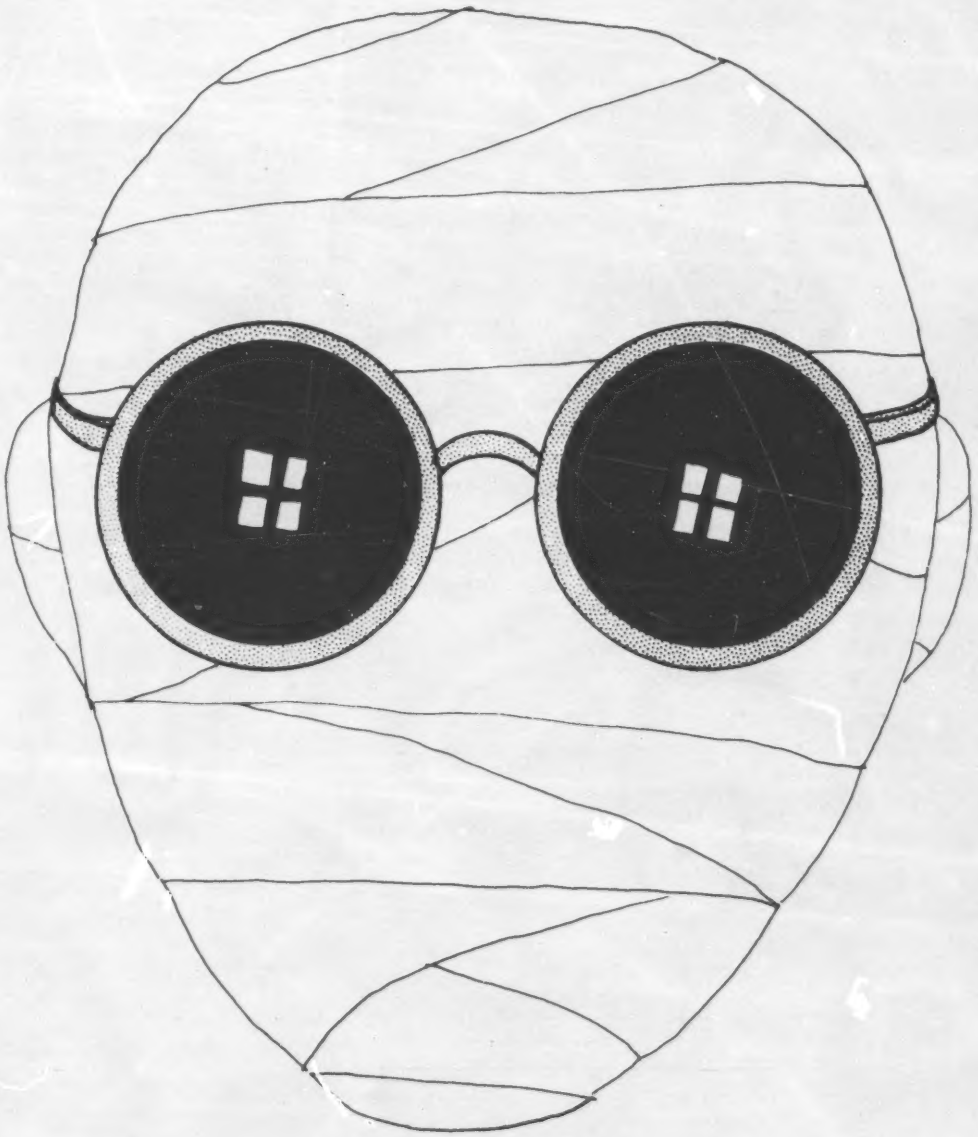
WELDING SAFETY
SEGURIDAD SOLDANDO



PROBLEM AREAS IN WELDING
PROBLEMAS EN LA AREA DE SOLDAR

ARC WELDING RADIATION CAN BURN!

LA RADIACIÓN PRODUCIDA POR LA SOLDADURA DE ARCO PUEDE QUEMAR

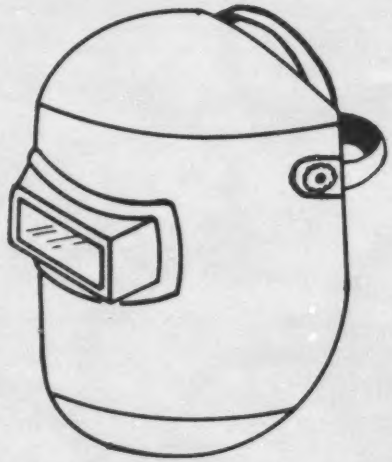


Always Use A Welding Helmet or Shield

SIEMPRE USE CASCO DE SOLDAR O UN ESCUDO

TM-2A

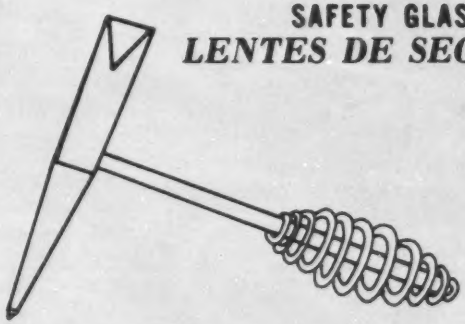
WELDING EQUIPMENT
EQUIPO DE SOLDADURA



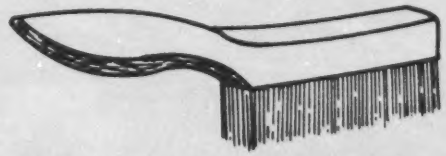
HELMET
CASCO

SAFETY GLASSES
LENTES DE SEGURIDAD

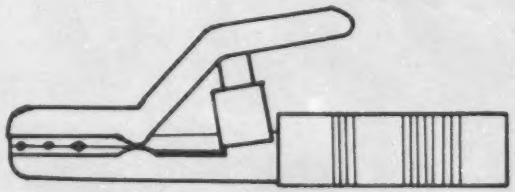
GLOVES
GUANTES



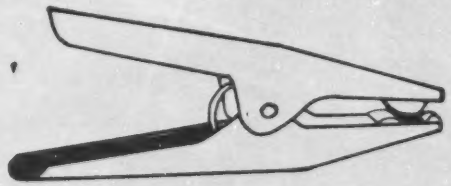
CHIPPING HAMMER
MARTILLO DE BRIZNA



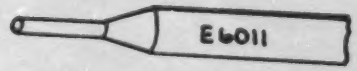
WIRE BRUSH
CEPILLO DE ALAMBRE



ELECTRODE HOLDER
AGARRADOR DEL ELECTRODO



GROUND CLAMP
PINZA DE TÍERRA



ELECTRODE
ELECTRODO

TM-3

IV-23

ELECTRODE CODING
CLAVE DEL ELECTRODO

AMERICAN WELDING SOCIETY NUMBER
NUMERO SOCIAL DE SOLDADURA DE AMERICA

E 6 0 1 1

ELECTRIC WELDING
SOLDADURA ELECTRICA

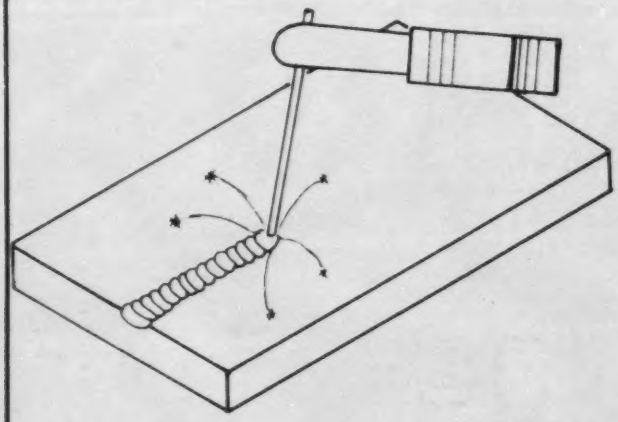
TENSIL STRENGTH
IN THOUSANDS OF POUNDS
PER SQUARE INCH
RESISTENCÍA A LA TENSION EN MILES DE LIBRAS POR PULGADA CUADRADA

WELDING POSITION
1– ALL POSITIONS
2– FLAT AND HORIZONTAL
POSICIÓN DE SOLDADURA
1-POSICIÓN CUALESQUIERA
2-PLANAS Y HORIZONTALES

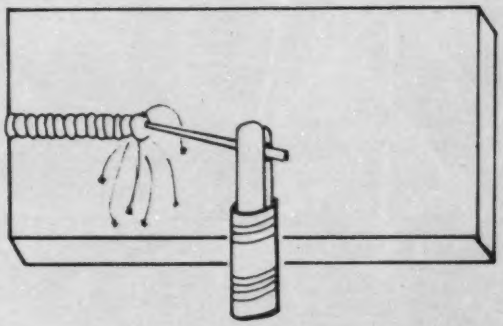
SPECIAL CHARACTERISTICS
PENETRATION
TYPE OF FLUX COATING
CARACTERÍSTICOS ESPECIALES EN PENETRACIÓN TYPO DE CAPA DE FUNDIMIENTO

TM-4

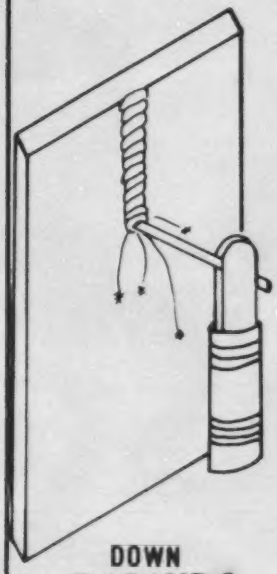
WELDING POSITIONS
POSICIONES DE LA SOLDADURA



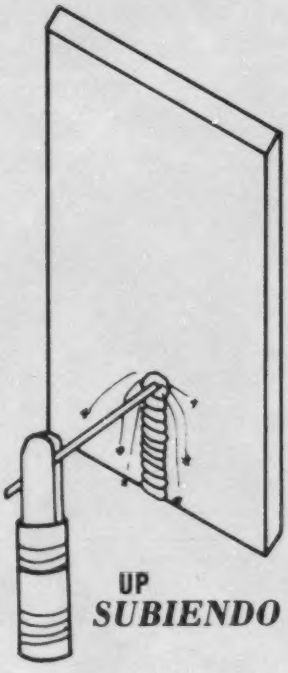
FLAT
PLANA



HORIZONTAL
HORIZONTAL

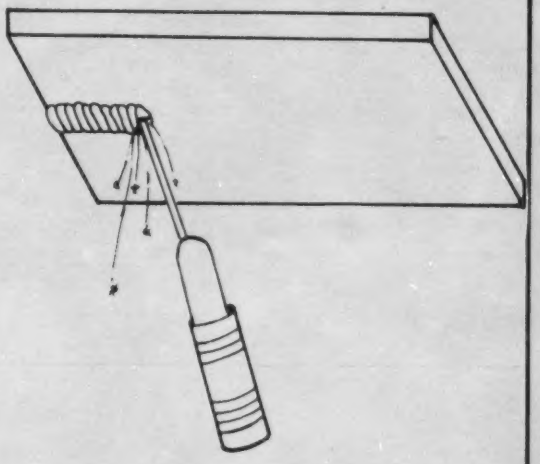


DOWN
BAJANDO



UP
SUBIENDO

VERTICAL
VERTICAL

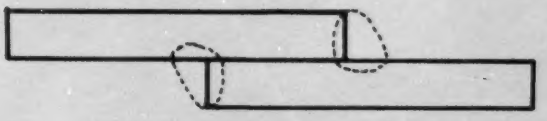


OVERHEAD
SOBRE LA CABEZA

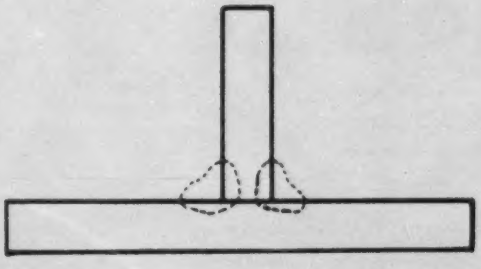
TM-5

JOINTS AND WELDS
COYUNTURAS Y SOLDADURAS

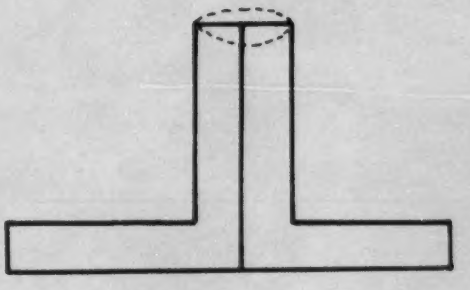
BUTT JOINT
COYUNTURA DE TOPE



LAP JOINT
COYUNTURA EMPALMADA



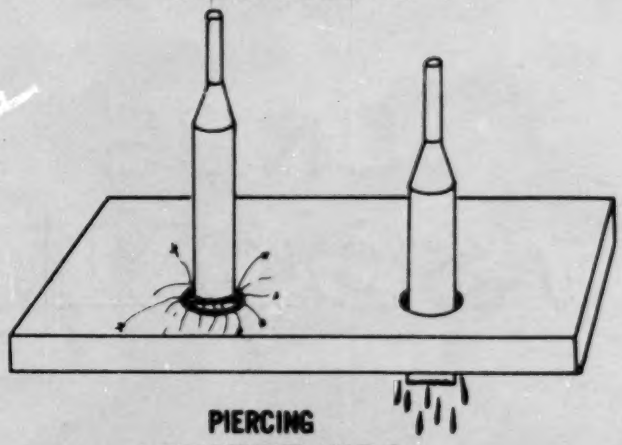
TEE JOINT
COYUNTURA DE TEE



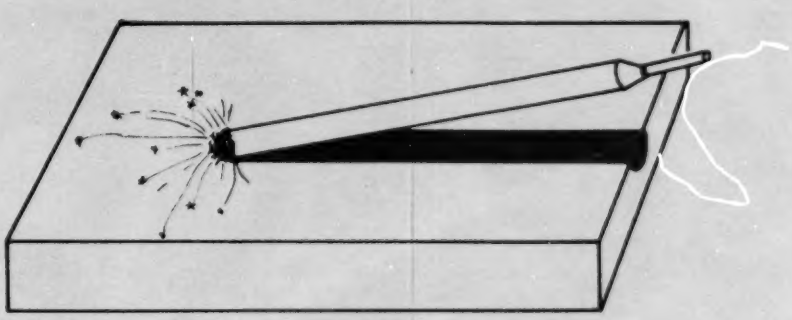
EDGE JOINT
COYUNTURA DE ORÍLLA

TM-6

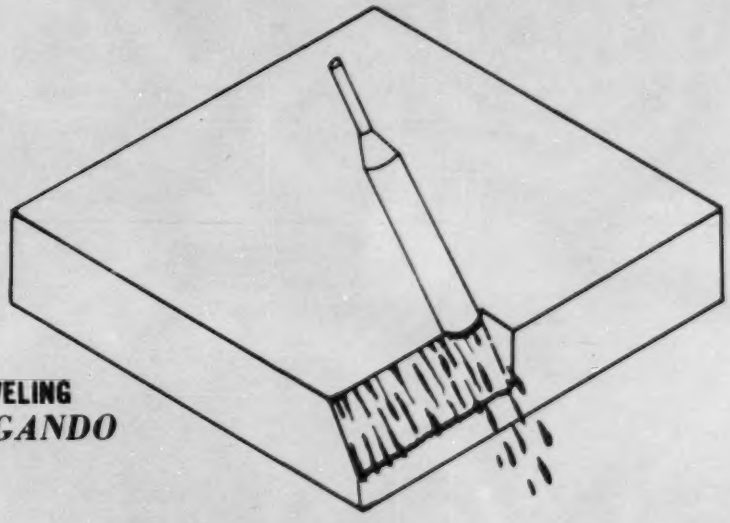
PIERCING, GOUGING, AND BEVELING
AGUJEREANDO, EXCAVANDO, Y SESGANDO



PIERCING
AGUJEREANDO



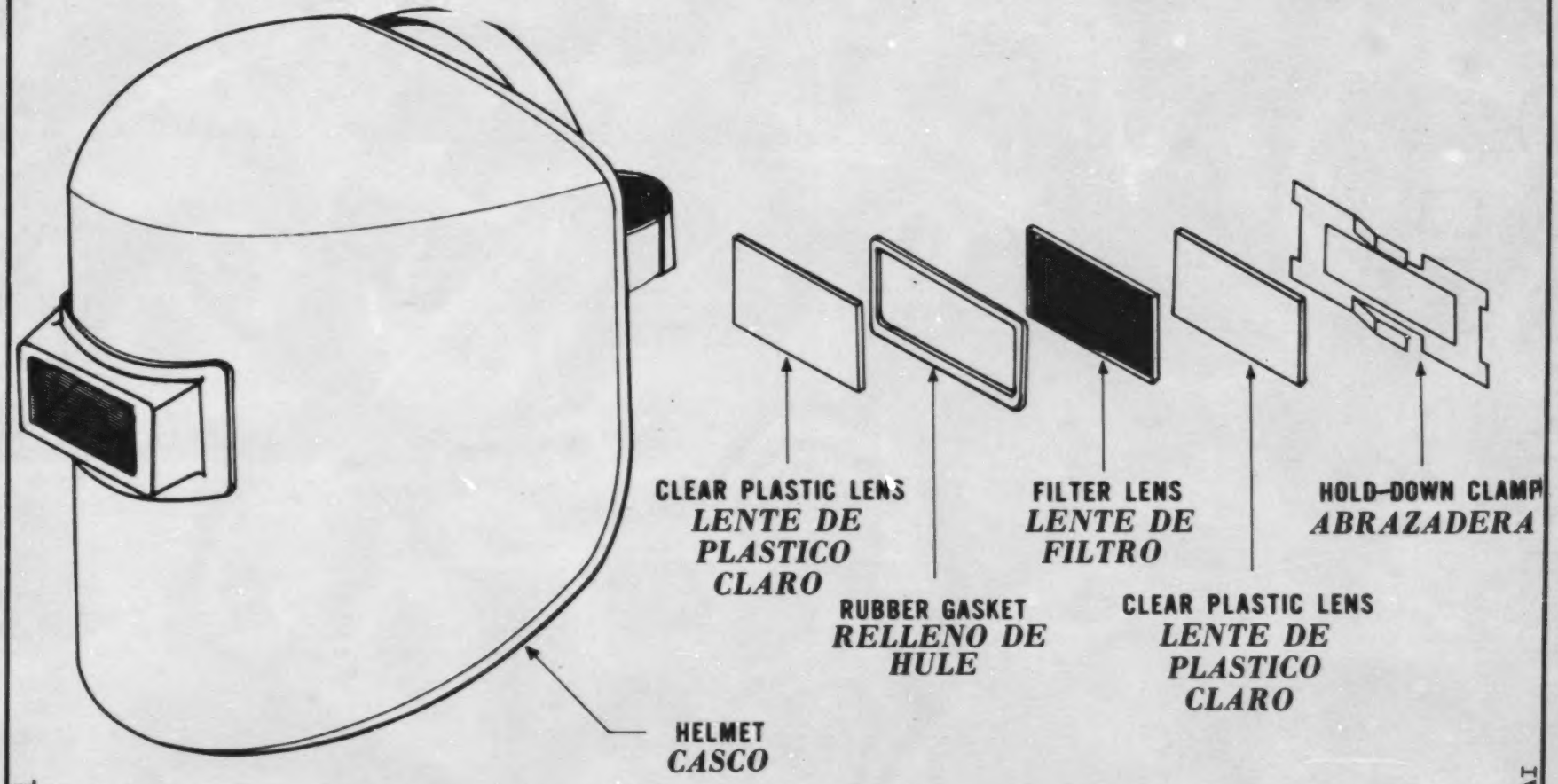
GOUGING
EXCAVANDO



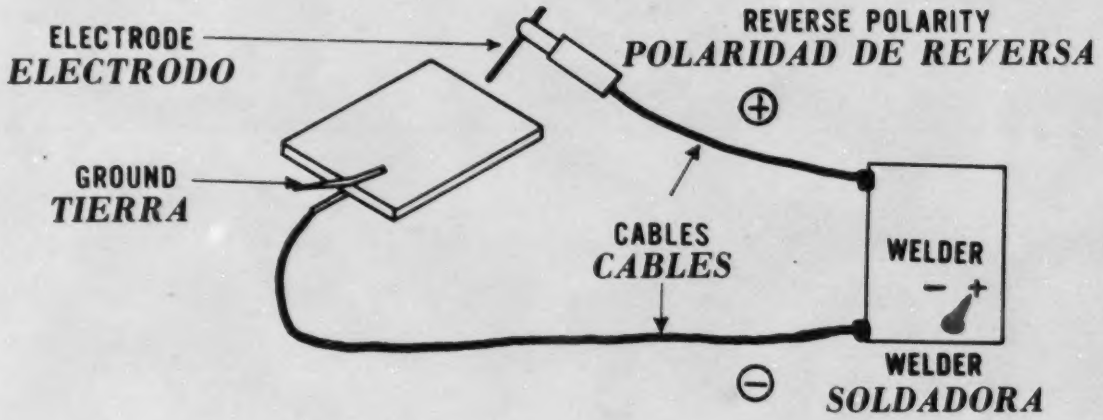
BEVELING
SESGANDO

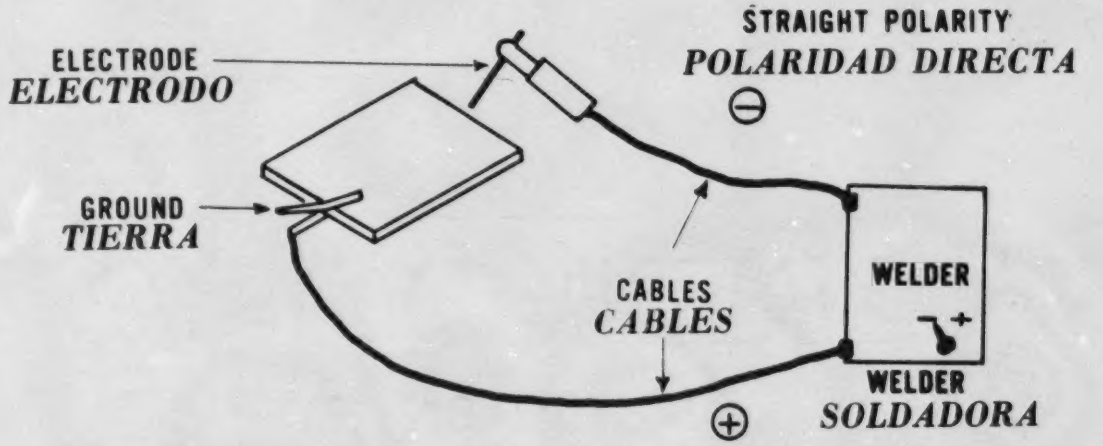
HELMET LENS INSTALLATION

INSTALACIÓN DE LENTES EN UN CASCO



DC POLARITY
POLARIDAD DE CORRIENTE DIRECTA

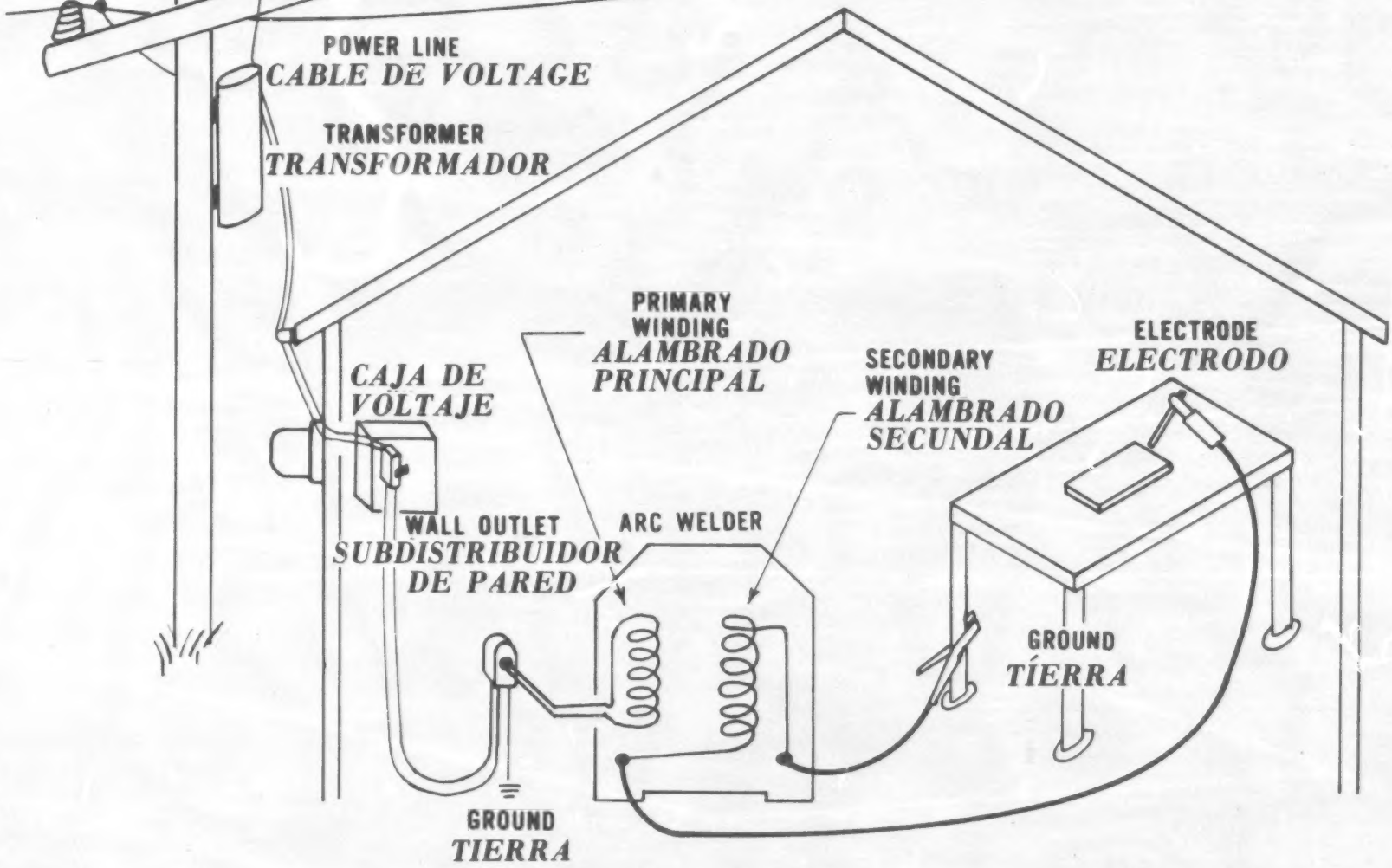




TM-9

AC WELDER

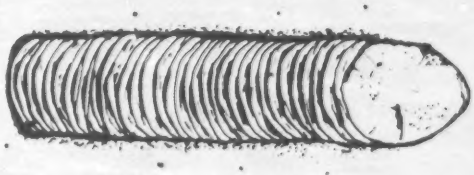
SOLDADORA DE CORRIENTE ALTERNA



TM-10

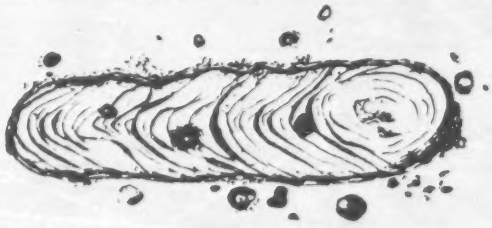
IV-37

PROPER AND IMPROPER FORMED BEADS
ABALORÍOS FORMADOS PROPÍA E IMPROPIAMENTE



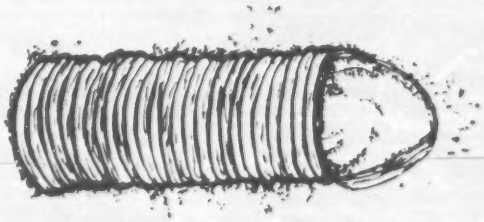
A GOOD BEAD
UN BUEN ABALORÍO

AMPERAGE TOO LOW
AMPERAJE MUY BAJO



AMPERAGE TOO HIGH
AMPERAJE MUY ÁLTO

SPEED TOO FAST
VELOCIDAD MUY RÁPIDA



SPEED TOO SLOW
VELOCIDAD MUY BAJA

TM-1